

Appln No.: 09/874,162  
 Applicant(s): Jason Koontz et al.  
 FUSION OF JAFZI AND JJAZI GENES IN ENDOMETRIAL  
 STROMAL TUMORS

Page 1 of 7

1/7

CCCGCCGCGGCTCGCAGAGCCGACACCAGGGGGGCTCTCGATGTAGCACCATGACAGGCATCGCCGCGGCTCCTTCTTCTCCAATACC 90  
 T G I A A A S F F S N T  
 TGCCGATTGCGGGGCTCGGAGCTCCACTTCCCCACCTTGGCCGACCTCATCGAGCACATCGAGGACAACCACATCGATACAGATCCACGG 180  
 C R F G G C G L H F P T L A D L I E H I E D N H I D T D P R  
 GTTTTAGAAAAACAAGATTACAGCAGCCAACTATGTTGCCCTGAGTTACATAAATAGATTTCATGACAGATGCTGCCGCCGAGAGCAG 270  
 V L E K Q E L Q Q P T Y V A L S Y I N R F M T D A A R R E Q  
 GAGTCCCTAAAGAAGAAGATTACGCCGAAGCTCTCGCTGACCTGTCCAGCTCAGTGTCTCGAGGGAATGTGTCCACTCCCCACGCCAC 360  
 E S L K K K I Q P K L S L T L S S S V S R G N V S T P P R H  
 AGCAGTGGAGCCTTACTCCCCCGTGACCCACCCATCACCCTCCTCTTATTCCGAGCAGCAGCTCCGACAGCAGCGAGTATGAC 450  
 S S G S L T P P V T P P I T P S S S F R S S T P T Q S E Y L  
 GAGGAGGAGGTGGACTATGAGGAGTCGGACAGCGATGAGTCCCTGGACCACAGAGAGTGCCATCAGCTCCGAAGCCATCCTCAGTCCATG 540  
 E E E V D Y E E S D S D E S W T T E S A I S S E A I L S S M  
 TGCATGAATGGAGGGGAAGAAGCCCTTTGCTGCTGCCAGTTCTCTGGATGTAAAAAGAGATACAAGATGTGAATGGCATAAAGTATCAC 630  
 C M N G G E E K P F A C P V P G C K K R Y K N V N G I K Y H  
 GCTAAGAATGGTCACAGAACACAGATTGCTGCTCGCAACCAATCAAGTGTGCGGTGCGGGAAGAGTTACAAGACAGCTCAGGCGCTGCGG 720  
 A K N G H R T Q I R V R K P E K C R C G K S Y K T A Q G L R  
 CACCACACAATCAATTTCCATCCCCGCTGCTCGGCTGAGATTATCAGGAAGATGCAGCAATAACATGCTGGTCATAACTGTGCCAAGAAA 810  
 H H T I N F H P P V S A E I I R K M Q Q  
 TCCTCACCAGCAGTTGCTGATTTTGAAGAACAGCCACCTTTTTCAGGGGAAGCATTGAGCAACCTTTAAAGAAAAAGAATTAAATGCAT 900  
 GCTTTAAATTTTCTGTAATTTTGAATGATGATCTTTGTAGAGTTAATGATTTGTACATTGACACATGTAATCATCATACCCATT 990  
 TCATTACTTTGATATAAGGTGCTAAACAAAAAAGCTCTAGGTTCTTCAGCACATTTCCCCAAAAACAAAAATAAATTGAGGGCATGTTG 1080  
 CATATTGTTGAATGTATTGCGGTGGTATCAACCTGGGGGAGGAGGGGCTGGCACTGAGATTTTTTTTCAAGATTGTAATGTGATTGA 1170  
 AGTTTTCAACACATCAACTCACATATGTTCAAAACCAAAATAATACCTTCATTATCAAAGTGGTTACCATGCCTTACATAATGGAGTTAG 1260  
 TATTTGTGAGTAGAAAGACTTTAGGTAATGAAATATAAATAAGAAAGATGTTTAAACATAATATGCTAAAAATATTTTCATATTAAAT 1350  
 AACATACGTAAAGGTGTGCTTTCTGTGTTTATATTATCTTGCAAAATCCTTTTGCCCTTTAAAAAGCTGAAAACTTGGCCATCTGACTTA 1440  
 CTAGTCATTTTAGTGTTATAAATGGCATTGTTGACAAAATAGTCTATTGAGTTCGTTTCATTATTAAACACACATTGATTGAGTGCCTGC 1530  
 TGGGTACAAGGGATTCAATTTATGCCATTGATATCTGCGGACCAAGATACCCATTGAGTAAATACTTTTTTCCTGAAATCTGTTAGA 1620  
 AAAGACTTTGAAATACTTCAGTGCAAGTGTGTGTGTGAAGTTTAGTTATATCTTCATCTTCAGATGAAGTTTAAAGCACTTTGTAG 1710  
 TTCTCTATTGCCAACATTTAATGTTTATGTGTTGCCAATCTTGCAACCACTGCCCTACCAACCTGTGGGTTGCAAACTCAGAACTAAA 1800  
 ATTCTAAGCAGCTTTCAAAGATGAACACTTTTGTAAAGCCCTATTGCCCTCTCTTCATGCTCATTTTTACTTTTTTAAAGGTACT 1890  
 TTTCTCATCATTTGTAGAGAGGTCTGATTCTCATTGGAAATGTCTGTTTAGCTTTATAAAACAAACACTTTGCTGAAATAGGAAAATG 1980  
 AGCCTTATTGACAAATTAAGTGCTTCTTGACGAGGTGGTCAAAGAAAGCATGACTAATACGACCTATTAGAGTAATCTACATCTGGACC 2070  
 ATTCCTTAAGTTTTTCTCACCAGCAGTACCATCATGCCTTGAGTGTTCTTTTCTCCCAAGTGCTATTCTTAAACACGAGAGTTTACCA 2160  
 GTTGCCTAATAATGCAATAAAAAATGCTTTGAGATAGCTAACTGCCATAAAACAACTCAAATTGCTTATAAAGTTTCTTCCCATGTTT 2250  
 CCATTTGATGAAAAGTCTTACATCACATATAACTGGGAAGCAGGGTCCCTCCTCAATTTTCAGACATTTTGAAGGATGACAGTTCTGT 2340  
 TTGTTAGATGAGTAAACCTCTATATTCAATAAGTTCTAAATCCTTCATTATGAGGATTCAAAGTATTATAAAACACTGCCCTCTAAA 2430  
 AATTTCTCAGATCTGAAGTATGGTCTTGCTCTGAATATACAGTGTATCCTATGTTTAAAGGGTGATCCAGACATGAGACGCACTA 2520  
 GTTGGTGCATAAGAAGGCCCACTTGCTATTTCATATCTACCTACAATTGACCAAAAAAATTTTAGGCCAGCAATTATTATTAGC 2610  
 TTGCTCTTTCTAGTGCAAGAACTGCAGGCTGGATCAGTAGTTCAACAGCTAAACAGTCATAAAATAGTCATTGTGCATGTTAAATTC 2700  
 TTTCAATGCTTTCAAAGATAAATCCAATTTCTATTACTTATTTCATTGTGACAGTATTACTAAACAGGTAAAGGATGGGAATATTTGTT 2790  
 ATACTGTGTATAGTGAATGTATTGTACTGTGTGTGAAACTGTGCTTTAAATATATTTTCATATGTTTGTGGGGACAGAGCACAT 2880  
 TAAGTCTGAAGCAACAGAGGTTGTTTGAAGTGAAGCAATTTAATCAAATTCCTGTCAAGAAAAGTGCTTATAAATGTAATGA 2970  
 AATCACATTTAAAAATAAAGTGCCTCTGACCCAAAAATAAA 3010

FIG. 1

FIG. 2A

FIG. 2B

Appln No.: 09/874,162  
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 STROMAL TUMORS

Page 4 of 7

4/7

CCCCCGGGCGCTCGCAGAGCCGACACCCAGGGGGCTCTCGATGTAGCACCATGACAGGCATCGCCGCCCTCTCTTCTCCAATACC 90  
 M T G I A A A S F F S N T  
 TGCCGATTGCGGGGCTGCGGACTCCACTTCCCCACCCTGGCCGACCTCATCGAGCACATCGAGGACAACCACATCGATACAGATCCACGG 180  
 C R F G G C G L H F P T L A D L I E H I E D N H I D T D P R  
 GTTTTAGAAAAACAAGAAATTACAGCAGCCAACTATGTTGCCCTGAGTTACATAAATAGATTTCATGACAGATGCTGCCCGCCGAGAGCAG 270  
 V L E K Q E L Q Q P T Y V A L S Y I N R F M T D A A R R E Q  
 GAGTCCCTAAAGAAGAAGATTGAGCCGAAGCTCTCGCTGACTCTGTCCAGCTCAGTGTCTCGAGGGAATGTGTCCACTCCCCACGCCAC 360  
 E S L K K K I Q P K L S L T L S S S V S R G N V S T P P R H  
 JAZF1 ← JJAZ1  
 AGCAGTGGAGCCTTACTCCCCCGTGACCCCAACCCATCACCCCTCTCTTCTTCCGAGCAGCACTCCGACAGAGCAACACAGATC 450  
 S S G S L T P P V T P P I T P S S S F R S S T P T E P T Q I  
 TATAGATTCTTCGAATCGGAATCTCATAGCACCATATTTTGACAGAACTCTTACTTACATGTCTCATCGAACTCCAGAAACAAAC 540  
 Y R F L R T R N L I A P I F L H R T L T Y M S H R N S R T N  
 ATCAAAAGGAAAAACATTTAAAGTTGATGATATGTTATCAAAAGTAGAGAAAAATGAAAGGAGAGCAAGAAATCTCATAGCTTGTGAGCTCAT 630  
 I K R K T F K V D D M L S K V E K M K G E Q E S H S L S A H  
 TTGCAGCTTACGTTTACTGGTTTCTTCCACAAAAATGATAAGCCATCACCAAACTCAGAAAAATGAACAAAATCTGTTACCTCGGAAGTC 720  
 L Q L T F T G F F H K N D K P S P N S E N E Q N S V T L E V  
 CTGCTTGTGAAAGTTGCCACAAAAAGAAAGGATGTAAGTTGTCCAATAAGGCAAGTTCCACAGGTAAAGCAGGTGCCCTTGATT 810  
 L L V K V C H K K R K D V S C P I R Q V P T G K K Q V P L I  
 CCTGACCTCAATCAACAAACCCGGAATTTCCCGTCCCTGCGAGTTCCAGTAATGAATTTGAACCTAGTAACAGCCATATGGTGAAG 900  
 P D L N Q T K P G N F P S L A V S S N E F E P S N S H M V K  
 TCTTACTCGTTGCTATTAGAGTGACTCGTCCAGGAAGAAGAGTTTAAATGGAATGATTAAATGGAGAAACCAATGAAATATTGATGTC 990  
 S Y S L L F R V T R P G R R E F N G M I N G E T N E I D V  
 AATGAAGAGCTTCCAGCCAGAAGAAACGAAATCGTGAGGATGGGGAAAGACATTTGTTGCACAAATGACAGTATTGATAAAACAGG 1080  
 N E E L P A R R R K R N R E D G E K T F V A Q M T V F D K N R  
 CGCTTACAGCTTTTAGATGGGAATATGAAGTAGCCATGCAGGAAATGGAAGATGTCCAATAAGCAAGAAAGAGCAACATGGGAGACT 1170  
 R L Q L L D G E Y E V A M Q E M E E C P I S K K R A T W E T  
 ATTCTTGATGGGAAGAGGCTGCCTCCATTCGAAACATTTTCTCAGGGACCTACGTTGCGAGTTCACTCTTCTGTTGGACAGGAGAGACCAAT 1260  
 I L D G K R L P P F E T F S Q G P T L Q F T L R W T G E T N  
 GATAAATCTACGGCTCTATTGCCAAACCTCTTGCCACTAGAAATTCAGAGAGTCTCCATCAGGAAAAACAGCTGGTTGAGTTAAACCT 1350  
 D K S T A P I A K P L A T R N S E S L H Q E N K P G S V K P  
 ACTCAAATATTGCTGTTAAAGAATCATTGACTACAGATCTACAACAAAGAAAAAGGATACTCCAAATGAAACCGACAAAAATTA 1440  
 T Q T I A V K E S L T T D L Q T R K E K D T P N E N R Q K L  
 AGAATATTTTATCAGTTTCTCTATAACAACAATAACAGGCAACAACTGAAGCAAGAGATGACCTGCATTGCCCTTGGTGACTCTGAAC 1530  
 R I F Y Q F L Y N N N T R Q Q T E A R D D L H C P W C T L N  
 TGCCGCAAACTTTATAGTTTACTCAAGCATCTTAAACTCTGCCATAGCAGATTTATCTTCAACTATGTTTATCATCCAAAAGGTGCTAGG 1620  
 C R K L Y S L L K H L K L C H S R F I F N Y V Y H P K G A R  
 ATAGATGTTTCTATCAATGAGTGTTATGATGGCTCCTATGCAGGAATCCTCAGGATATTTCATCGCCAACTGGATTTGCTTTTAGTCGC 1710  
 I D V S I N E C Y D G S Y A G N P Q D I H R Q P G F A F S R  
 AACGGACCAAGTTAAGAGAACCTATCACACATATCTTGTGTGCAGGCCAAAAACGAACAAAGCAAGCATGTCTGAATTTCTTGAATCT 1800  
 N G P V K R T P I T H I L V C R P K R T K A S M S E F L E S  
 GAAGATGGGGAAGTAGAACAGCAAGAACATATAGTAGTGGCCACAATCGTCTGATTTCATAGTGATACCTGCTTACCTCTCCGTCCA 1890  
 E D G E V E Q Q R T Y S S G H N R L Y F H S D T C L P L R P  
 CAAGAAATGGAAGTAGATAGTGAAGATGAAAGGATCCTGAATGGCTAAGAGAAAAACCATACACAAATGAAGAGTTTCTGATGTT 1980  
 Q E V D S E D E K D P E W L R E K T I T Q I E E F S D V  
 AATGAAGGAGAGAAAGAGTATGAAATCTGGAATCTCCATGTGATGAAGCATGGGTTTATGTGACAATCAATGAATCATGCTCTGT 2070  
 N E G E K E V M K L W N L H V M K H G F I A D N Q M N H A C  
 ATGCTGTTTGTAGAAAATATGGACAGAAAAATAATGAAGAAATTTATGTGAAACTTCATGCTTCTAGTCAGCATGCATGACTTT 2160  
 M L F V E N Y G Q K I I K K N L C R N F M L H L V S M H D F

FIG. 3A

5/7

AATCTTATTAGCATTAATGTCAATAGATAAAGCTGTTACCAAGCTCCGTGAAATGCAGCAAAAATAGAAAAGGGGGAATCTGCTTCCCCT 2250  
 N L I S I M S I D K A V T K L R E M Q Q K L E K G E S A S P  
 GCAACGAAGAAATAACTGAAGAACAAAATGGGACAGCAAAATGGATTTAGTGAATTAATCACTCAAAAGAGAAAGCTTTGGAAACAGATAGT 2340  
 A N E E I T E E Q N G T A N G F S E I N S K E K A L E T D S  
 GTCTCAGGGTTTCAAAAACAGAGCAAAAACAAAACCTCTGAAGAAGCTTAACCCCATGTTATGGACAAACACTGAAATATACATTTTAGG 2430  
 V S G V S K Q S K K Q K L  
 GAATTCATCCTCTAAGAATATATGTTTTGTTTTTAATCATATATGTTCCAAACAGGCACCTGTTAGATGAAGTAAATGATTTCAACAGGATA 2520  
 TTTGTATCAGGGTTCTACTTCACCTTCATATGCAGCATATACATGTATATCACTTTTATTGATGTCTATAAACACATTCCTGTACTTTAAGCA 2610  
 TGAAGCAATATTTCAAAGTATTTTAACTCAACCAATGTCAATAATGTTGAATGTATAGTATGATCTAGAAATTTATTCATATATAAATCAG 2700  
 AATTTTTGCATTTATGAACGGCTGTTTTCTACTTTGTAATGTGAGACATTTTCTGGGGAGGGAAAAATTGGAATGGTCCCTTTTT 2790  
 TAGAAATTGAAGTGGTCTTCATATGTCAACTACAGAAAAGGAAAAAATAGAAATTTGAAGGATTTTATGAAATTTATGCAATTACTAT 2880  
 TTGCAGTCAAACTTTGATCCTGTTTTGAAATCATTTGTCAATTCGGAATGAAAAATATATATGTAATTTTACATTTACATAAGTTCCTT 2970  
 TTACAAATTAAGAAATAGCACTTCTTCATCTTATGCTGTTGAGAGATATTAATTTTACATTTGACAGTGAATGCTATGTTGGT 3060  
 TTATAAGATTACAGACCATTTGTTTTTCATGTGGATAATTTTACTGCAATGCTCACCGGATGTTTTTTTTTTTAACTTGAACATTTTG 3150  
 CTGTTTTGTTTTCTTTTAAATAGATATCAACGGAAAAATTAAGCTGTTTCATATCTTTTAAATTAGGATTGCAACCAAGGAAAGAA 3240  
 CGCATTTGAGATTTAAGATGTCACTTATAGGGGAGAGTGTCTTAAAGTCAACAGAAACTGTATGCGCTTTTATTTGTTTGA 3330  
 AGGATGTCTTTGTAATGTGTTTCATGAATAGAAATATCCAATAGAGTAAGCTGACTTGAATCATTTTGAAGCAATTTTGCCTGTGTTATA 3420  
 TGTGTTTCAAGCAATATTTGCAAGTGGATTTTCTCCAAACAGAAAGTGGATTCCTACTGCGCACTTAACAGCACCAATAGGTTTTTAT 3510  
 TCCAACCCGAGCACTGTGTTGAGTACATCACCTCAATTTTTTATATCCTTAAAGATATTGCAATTTTCATATTCTTTATTTATAAAG 3600  
 GATCAATGCTGTGTAATACAGGTATTTTTAAATTTTAAATTTTCAATCCACCAATCAGATGCAATTTCCCTATTTTGTAAATGAAGG 3690  
 GATATATAAGCTTTCTAATGGTCTTTCAGAAATTTTAAATGTAATACTGATTTGACTGGTCTTTAAGATGTGTTAACTGTGAGGC 3780  
 TATTTAAGCAATAGTGTGATTTGTGATCCAGTATTAAAGTCTTAGTCAATGATTTTGTGTTTAAAAAAAATAGGAAAGGG 3870  
 AAATCGAGCTTTTCAATACAGATTTCTTGAATGGTAAAGCTCTCCAAATGATGATTTCTAGTAACTCTGATTTTTCCTCTGATAGTAG 3960  
 ATCTCGAGGTTTATCTCGGGCTTTAATTTGCTAAGCTGTGCACATATGTAATAAAAAAAGATTTATTTAGGGGAGATGTAG 4050  
 GTGTAGAAATTATGCTTATGTCAATTTCTAAGCAGTTATGCTCTTAATGCTTAAAGAGGCTAGCATTTGTCACAAAAAGTTGGTGA 4140  
 TTCCCAACCCCAATAGTAATAAATTAATCTCTGTTGAGTAAAGCTTTTATGTCATCGTAAAGCTGGAATAATCCCTTTGTTCTATTTA 4230  
 TAAAAAAGTGCTTTTCTATATGTACCTTGATAACAGATTTTGAAGAATCTCTGTAAGATGATAAGCAATTTGAATGGTACAGTAGATG 4320  
 TAAAAAAATTCAGTTTAAAAAGAACATTTGTTTTTACATTAATGTTTTTAAATCAAAATGATTTTGTACATAAAGTTCAATAATAT 4409

FIG. 3B

Appin No.: 09/874,162  
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 FUSION OF JAFZI AND JJAZI GENES IN ENDOMETRIAL  
 STROMAL TUMORS

Page 6 of 7

6/7

# Structure of JAFZ1

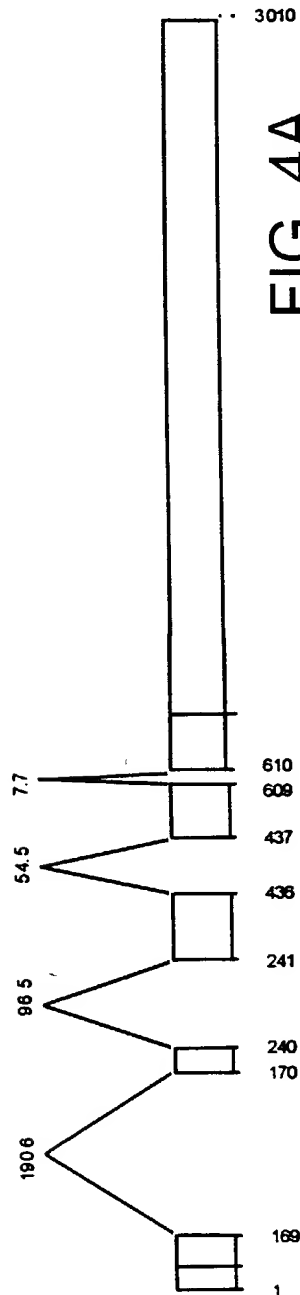


FIG. 4A

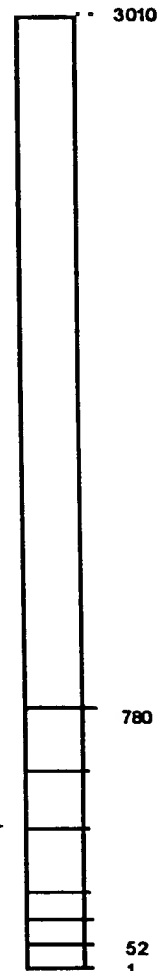


FIG. 4B

7/7

# Structure of JJAZ1

